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Open C Type Permanent Magnet With Two Columns For Magnetic Resonance

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention generally relates to a medical apparatus, and more particularly to a permanent magnet used for magnetic resonance imaging for medical diagnosis.

Brief Description of the Prior Arts

The magnetic resonance imaging apparatus is a medical apparatus developed in 1980's, and the most advanced clinical diagnosis apparatus for diagnosing precancer and other diseases. The magnet is a key part of the magnetic resonance imaging apparatus, SNR (signal-to-noise ratio) of the magnetic resonance imaging apparatus has a direct relation to the performance of the magnet, so that performance of the magnet determines the quality of the image to a certain extent. The permanent magnet has a simple structure without additional means and is convenient to maintain, can be operated safely, and area of the stray magnetic field therearound is small, therefore, the scientific and technological circles and medicine circles pay more and more regards for the magnetic resonance imaging apparatus using permanent magnet.

However, the conventional box-shape permanent magnet formed of ferrite magnetic material is low in magnetic intensity, heavy, big in volume, closed and poor in practicability. In the early stage, weight of a magnet of 3000Gs is substantially 100 ton, so that it is difficult to transport and mount the magnet.